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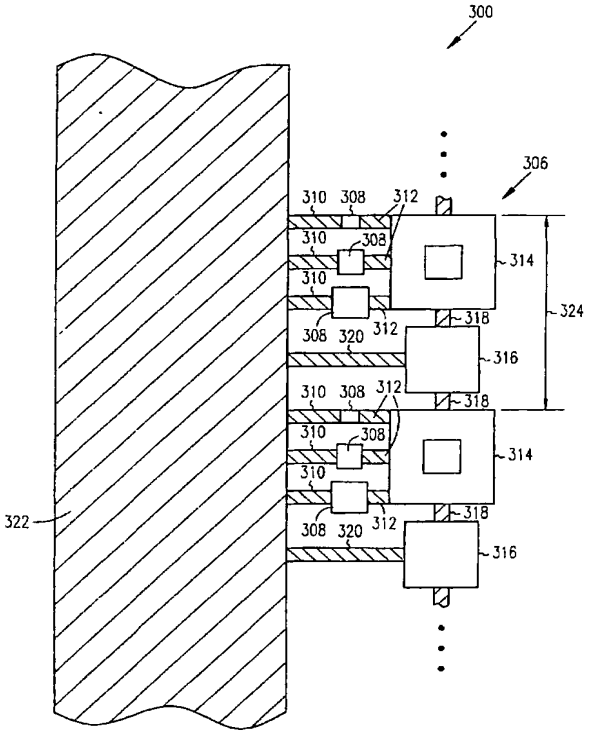
(54) Title: MONOLITHIC ARRAY AMPLIFIER WITH PERIODIC BIAS-LINE BYPASSING STRUCTURE AND METHOD



(57) Abstract: A bias-line bypassing structure (300) comprises a plurality of bias-line bypass circuits (306) forming a periodic structure at least partially around each of a plurality of amplification units (202) to reduce RF current flow between the amplification units and a grid-bias network (204). Each bias-line bypass circuit (306) may comprise thin-film capacitors (308), inductive wire bridges (310), and thin-film resistors (312) connected to ground vias (314). The thin-film capacitors (308) may have differing values selected to resonate with an associated one of the inductive wire bridges (310) and an associated one of the thin-film resistors (312) to shunt RF current flow over a range of RF frequencies. In some embodiments, the inductive wire bridges (310) may comprise inductive wire-bridge fuses to provide an open circuit in case an associated one the thin-film capacitors (308) shorts to ground.

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